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Class Specifications
for the Class:

CRASH/FIRE EQUIPMENT MECHANIC

Duties Summary:

Maintains and repairs aircraft crash/fire rescue vehicles, boats and auxiliary equipment; repairs diesel and gasoline engines, including synchronized dual engines; fabricates parts and performs welding to modify vehicles and construct or repair various items; may repair automobiles, trucks, and heavy construction equipment; and performs other duties as required.

Distinguishing Characteristics:

Positions in this class repair and maintain crash/firefighting vehicles, boats and auxiliary equipment. This is the journeyman level in the maintenance and repair of synchronized dual engines and crash/fire auxiliary equipment such as high pressure pump engines, hydraulic turret controls, ground sweep nozzles, hose reel controls, air compressors, hydraulically or pneumatically operated gauges, valves and meters, and electrical devices. Work includes fabricating parts and welding to repair or make minor modification to vehicles and equipment. Positions in this class may also repair cars, trucks and heavy construction equipment, including the complete overhaul of gasoline engines and smaller diesel engines.

The immediate supervisor primarily provides administrative supervision, and manufacturers' manuals are the main source of technical guidance for positions in this class. Therefore, ability to read and comprehend complicated maintenance and repair procedures for hydraulic, air and electrical power units and synchronized dual engines is essential to adequately perform work characteristic of this class.

Examples of Duties:

Maintains and repairs aircraft crash/fire rescue vehicles, boats and auxiliary equipment; troubleshoots and repairs gasoline and diesel engines, synchronized dual engines, brake systems, transmissions, drive shafts, and floating automatic locking and torque proportioning differential; adjusts, repairs and maintains high pressure pump engines, hydraulic, turret controls, ground

sweep nozzles, hose reel controls, air compressors, and a variety of gauges, valves and meters; performs complete overhaul of gasoline engines and smaller diesel engines; grinds valves; wires and rewires the exterior lines of electrical systems such as starters, distributors, generators, alternators, magnetos and alarm systems; recommends rewiring of components or replacement of total system; adjusts electric synchronizing motors and variable speed hydraulic governors; replaces broken, worn and defective parts such as gears, shafts and bearings; fabricates parts when necessary for the repair or modification of vehicles or equipment; welds body frames, cracked manifolds, oil pans, etc., and repairs dents and rust spots on body and fender of vehicles; performs welding and related tasks to install or repair metal fences, gates, posts, guardrails, hose reel cabinets, doors, signs and carts; keeps maintenance and repair records; keeps a supply of specialized crash/ fire vehicle and equipment parts which cannot be obtained locally; informs firefighters of the proper use of crash/firefighting vehicles and auxiliary equipment; repairs fire hoses and nozzles; repairs portable and stationary battery chargers, portable and stationary power units; and may respond to fire calls to see that equipment is operating properly.

Knowledge and Abilities Required:

Knowledge of: Theories and principles of both diesel and gas internal combustion engines; troubleshooting, repair and maintenance procedures for both diesel and gasoline engines, brake systems, transmissions, drive shafts, and synchronized dual engines; troubleshooting, repair and maintenance procedures for high pressure positive displacement and centrifugal pumps; the use of hydraulic oil presses, gauges, gear or bearing pullers, testing equipment and mechanical tools used in the automotive repair trade; principles of electricity as applied to the electrical systems of automotive vehicles; and the occupational hazards and precautionary measures applicable to the automotive repair trade.

Ability to: Read and comprehend manufacturers' manuals for troubleshooting, repair and operating procedures; repair synchronized dual engines; locate and correct mechanical defects in gasoline and diesel driven vehicles; maintain and repair equipment such as high pressure rotary and centrifugal pumps, turret controls, nozzles and air compressors; perform arc welding and simple body and fender repairs; interpret and work from drawings as well as from oral and written instructions, work with

DATE APPROVED: 12/27/79 /s/ Wayne Yamasaki
for DONALD BOTELHO
Director of Personnel Services